

WHAT IS CLAIMED IS:

1. An amplifier for converting a charge signal,  
comprising:

5        a signal converting circuit for converting a charge  
signal from a sensor by an effect of a detecting target and  
by a converted signal into a voltage signal; and  
an automatic correction circuit for detecting a leakage  
of the charges generated in a signal transmission system and  
10      for automatically correcting an output level of said signal  
converting circuit so that the output levels are the same at  
the start timing and the end timing for generating the  
charges of said sensor.

15       2. The amplifier for converting a charge signal  
according to Claim 1, further comprising:  
a reset circuit for discharging an input charge by an  
external signal.

20       3. The amplifier for converting a charge signal  
according to Claim 2, wherein:  
the sensor is a cylinder pressure sensor for detecting  
a combustion pressure in an engine cylinder.

25       4. The amplifier for converting a charge signal

according to Claim 3, wherein:

the external signal is synchronous with a rotational angle of a crankshaft of the engine and the input charge of said signal converting circuit is discharged at each  
5 predetermined combustion cycle.